File
m/003/016

MINIDOKA RANGER DISTRICT

USDA FOREST SERVICE
SAWTOOTH NATIONAL FOREST
3650 SOUTH OVERLAND AVE
BURLEY, IDAHO 83318

TELEPHONE (208) 678-0430
FAX (208) 677-4878

MINIDOKA
RANGER DISTRICT
SAWTOOTH NATIONAL FOREST

TO: Lynn Kunzler

FAX #: 801 ~~208~~ [illegible] 359-3940

FROM: Steve Flock

DATE: 3 Apr 06

SUBJECT: Dove Ck.

MESSAGE: ① Authorization Letter
② Signed Reclamation Plan
Hope this works!
Steve

Page 1 of ____ pages

If you do not receive all the pages, please call Steve at (208) 678-0430.

RECEIVED
APR 03 2006
DIV. OF OIL, GAS & MINING

USDA United States Department of Agriculture
Forest Service
Sawtooth National Forest
Minidoka Ranger District
3650 South Overland Ave.
Burley, ID. 83318-3242
208-678-0430
Fax: 208-677-4878

File Code: 2810
Date: February 27, 2006

Bill Bown
Bonneville Quarries, Inc.
842 West 400 North
West Bountiful, UT 84087

Dear Mr. Bown:

This letter will serve as your authorization to conduct the mining operations describe in your Plan of Operations dated April 28, 1998, with subsequent updates for the Dove Creek Quarry located at T.13N., R.16W., Sections 12, 13, and 14, Box Elder County, Utah. Your plan of operations included a description of the following activities:

> The development of two new quarry locations, the Vertical Cloud and Sunshine East, and the construction of a new access road to these quarry locations. This new access road incorporates portions of a road constructed without authorization in 2000.

The following mitigation measures were identified in the environmental assessment for this proposal. These mitigation measures are hereby incorporated into your Plan of Operations:

Hazmat, Water Quality, Neutralization, and Reclamation

1. Non–native Plant Mitigation

To ensure that non-native plant species concerns are addressed within the Dove Creek Quarry Project, the following Forest Plan direction will be followed. Detailed direction for non-native plant mitigation can be found in Chapter III of the Sawtooth Forest Plan (pages III-36 and III-37). Key actions and/or requirements will be summarized here to ensure this project meets Forest Plan standards for non-native plants:

- Only certified weed-free hay, straw, feed, mulch, and all seed should be used in the project area (NPST01, NPST02, NPST06)
- In the operating plan where land-disturbing activities take place, include the following provisions:
  - Revegetate areas as per NPSTO3. Forest Botanists will be consulted to determine if reseeding is necessary following implementation of the Alternative 1. If seeding is determined necessary, a Forest Service botanist will recommend a Forest Service approved and appropriate native seed mix.
  - Include clean equipment provisions as per NPST03 (standard). Ensure that excavators, backhoes, trucks, and other equipment are clean (i.e., not capable of transmitting noticeable sediment, noxious weed seed, or other substances).

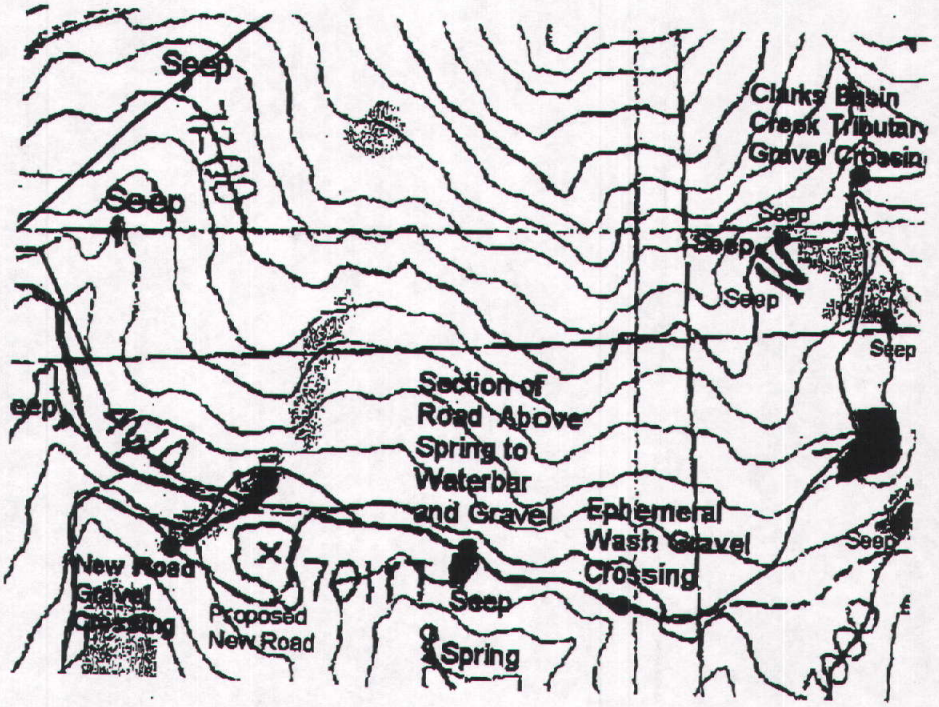
- A washing station off-Forest should be established to limit weed seed from being introduced into the operation site and newly disturbed areas as per NPGU03.

- Treat weeds prior to ground disturbing activities such as road construction or pit expansion. If areas identified for project implementation are within known noxious weed sites, treatment/eradication efforts must be made prior to ground disturbing activities as per NPST10. Control noxious weeds during operational phases to limit the amount of seed in the soil. Control weeds on the topsoil stockpile through treatment or planting preferred species in these storage areas.
- Source sites for gravel and borrow materials should be inspected prior to use or transport as per NPST07. Do not use gravel or borrow material from areas with noxious weed present as per NPST08
- Where feasible and practical, staging and parking areas should be located in weed free sites as per NPGU04.

2. Watershed (Hydrology and Soils) Mitigation

- No fuels or lubricants are proposed to be stored on site. Fuel or equipment spills from equipment failure could occur. If such equipment problems occur, the equipment will be brought to a line containment area to prevent contamination of groundwater or surface runoff. The operator is required to notify the Utah Department of Environmental Quality and the Utah Department of Oil, Gas and Mining in the event of a spill. The operator will also notify the Forest Service in case of spills or other hazardous material incidents at the site.
- Fueling and vehicle maintenance will take place in a lined containment area. Refueling of vehicles will not be permitted within RCAs.
- No equipment will be left on site at the close of yearly operations to limit the possibility of fuel or hydraulic fluid leaks from unattended equipment.
- In order to prevent movement of the unstable masses below the proposed Vertical Cloud Quarry, the operator will not load the slopes immediately above the seeps with waste rock material from quarry operations. Additionally, waste material will not be side cast over the area above the seeps to preserve the water quality of the seeps. (Issue #2)
- Topsoil shall be salvaged, stockpiled, and seeded (interim reclamation) ahead of quarry operations to provide a suitable plant-growth medium for reclamation. Where available, the top 12 inches of topsoil shall be salvaged. As soil depth at the site may be shallow or nonexistent, soils in these areas shall be salvaged to the available depth.
- Blasting will not occur within 500 feet or greater from seeps and springs. Fly rock travel distance would be monitored to determine if the fly rock is reaching the springs and seeps or intermittent channels, for a given size of blast (based on typical blast size/explosives amounts used). Blasting activities would cease and the authorized officer would be notified in the event of failures/mass movement being initiated within seep areas. (Issue #2)
- At Stream Course Crossings (below), a waterbar will be constructed, leading out onto the contour of the downslope side of the road, so that the runoff would be directed into the upland vegetation (sagebrush) and would not be directed into the

spring site. Also, the low point in the road directly above the spring will be graveled with a layer of crushed rock, at least 0.75 inch in size, to a depth of 2.5 to 3.5 inches (Idaho BMP, page 8). This will prevent rutting and reduce the potential sediment input into the spring source. Gravel should also be placed on both approaches for approximately 75 to 100 feet. At the channel crossing on the new road section, a gravel crossing will be constructed of a layer of crushed rock, at least 0.75 inches in size onto the crossing surface to a depth of 2.5 to 3.5 inches. At the ephemeral drainage crossing, a layer of crushed rock at least 0.75 inches in size onto the crossing surface to a depth of 2.5 to 3.5 inches. At the Clarks Basin Tributary Crossing the existing crossing and approaches will be graveled with a layer of crushed rock at least 0.75 inches in size onto the road surface to a depth of 2.5 to 3.5 inches. The road/stream crossings should be kept as perpendicular to the streamcourses as possible (SWCP 15.15) to minimize damage to the streamcourses.



- The project life is projected to be 30 years. Projected reclamation for project area will include:

Restoration of Vertical Cloud Quarry:

1. Backfill pit and recontour to achieve natural slopes
2. Spread salvaged topsoil and reseed
3. Mulch areas that have been reseeded

Restoration of Sunshine East Quarry:

1. Slope-back the pit walls
2. Pull-back of side cast material and waste piles where available
3. Recontour where sufficient waste material is present
4. Reseed where suitable growing medium exists

Road Reclamation (1.4 linear miles):

1. Rip and pull back sidecast material
2. Recontour
3. Seed

- Since the project life is projected to be 30 years, refinement of Best Management Practices (BMPs) for site reclamation should be assigned at that time to assure that the most current reclamation measures and technologies are employed.

3. **Public Safety**
   - During operations, warning signs will be posted warning the public about mining activity and heavy equipment road traffic.
   - During periods of non-operation, warning signs will be posted warning the public about possible hazards, specifically high walls and rock fall areas below waste rock dumps.
   - No explosives, blasting caps, or detonation cord will be stored on site during operations

4. **Wildlife Habitat**
   - Addition of a gate and appropriate signing to limit non-quarry vehicle travel within the off-road motorized vehicle closure (Sawtooth Forest Closure Order, May 1 – June 30th).
   - Avoid blasting activities in May during early morning (sunrise to 0900).
   - No quarrying activities will occur within Riparian Conservation Areas (RCAs) or within spring or seep areas.
   - Reclamation of abandoned quarries will meet 70% cover of adjacent undisturbed areas when quarrying ceases.
   - During the Upper Dove Creek Area closure period (May 1 – June 30), hauling from the Sunshine East and Vertical Cloud Quarries will be limited to 1 truck per day. After June 30, the operator can haul rock from these quarries to the proposed 2.1 loads per day.

Monitoring and Maintenance

1. A monitoring system for the seeps below the Vertical Cloud Quarry will be setup by the operator prior to beginning excavation of the quarry. This will include setting up several survey and photo points to determine if slope movement is occurring.
2. Introduction of noxious weed populations resulting from both existing and proposed operations will be monitored by both the operator and Forest Service.
3. At a minimum, a yearly inspection would be conducted by the Forest Service of the operations.
4. Monitor to assure reclamation of existing quarries is occurring concurrently with development of new quarries and to assure 70% cover requirement is met.

5. Springs and seeps in the vicinity of the quarries will be monitored for mining related impacts, including soil stability, sedimentation, flyrock, and waste rock impacts.
6. The operator, whether or not directed by the Forest Service, shall immediately extinguish, without expense to the Government, all fires on or in the vicinity of the project which are caused by the operator, whether set directly or indirectly as a result of the operation. The operator may be held liable for all damages and costs of additional labor, subsistence, equipment, supplies, and transportation resulting from fires set by the operation. The operator will comply with all applicable fire restrictions or closures during operations.

A reclamation bond in the amount of $19,438 has been calculated for the disturbance proposed under this plan of operations, both for new disturbance and the unauthorized road constructed in 2001 that are now part of the plan of operations. This would be in addition to the existing bond for the existing quarries and disturbed areas. Prior to the development of the Vertical Cloud and Sunshine East Quarries, the additional bonding will need to be in place. It is our understanding that you have completed the reclamation earthwork on the existing Dad's Dream and Upper White Quarries and of several thousand feet of existing two-track roads. Additionally, you have reclaimed the majority of the previously unauthorized road from the damaged spring to the new quarry locations because you do not plan on developing the two new quarries at this time.

Approximately 2100 linear feet of the previously unauthorized access road (from the FS/Private Boundary to the now fenced spring area) now incorporated into your plan of operations has not been reclaimed as of the date of this decision. Because this section of road has not been reclaimed, it will need to be bonded until it is reclaimed at an estimate of $2,600. Because the reclamation work done last fall exceeds this value, the existing reclamation bond is adequate to cover this unreclaimed section of road.

Please review the enclosed reclamation plan and bond estimate and return a signed copy to this office. I have enclosed an additional copy for you to forward on to Lynn Kunzler, at the Utah Division of Oil, Gas and Mining, if possible.

If you have any questions, you may contact Steve Flock, Minerals Management Specialist, at the above address or telephone number.

Sincerely,

Scott Nannenga

SCOTT C. NANNENGA
Minidoka District Ranger

cc. Dove Creek Quarries
P.O. Box 729
Park Valley, UT 84329

cc: Jeff Gabardi

Dove Creek Quarry Expansion Plan – Reclamation Plan

Project Identification Number –Dove Creek Quarry
Desired Future Condition – After sample removal and processing – *To restore the site to as near pre-existing condition as possible such that water quality, habitat, and aesthetic values are mitigated. Eliminate the need for long-term maintenance at the site.*

Interim and Concurrent Reclamation Objectives – *As part of the mining operations concurrent reclamation will occur prior to the opening of the two new quarries minimizing the amount of disturbance. Monitoring of seep areas during operations will insure that possible impacts are identified early and mitigated.*

Final Reclamation Objectives: –

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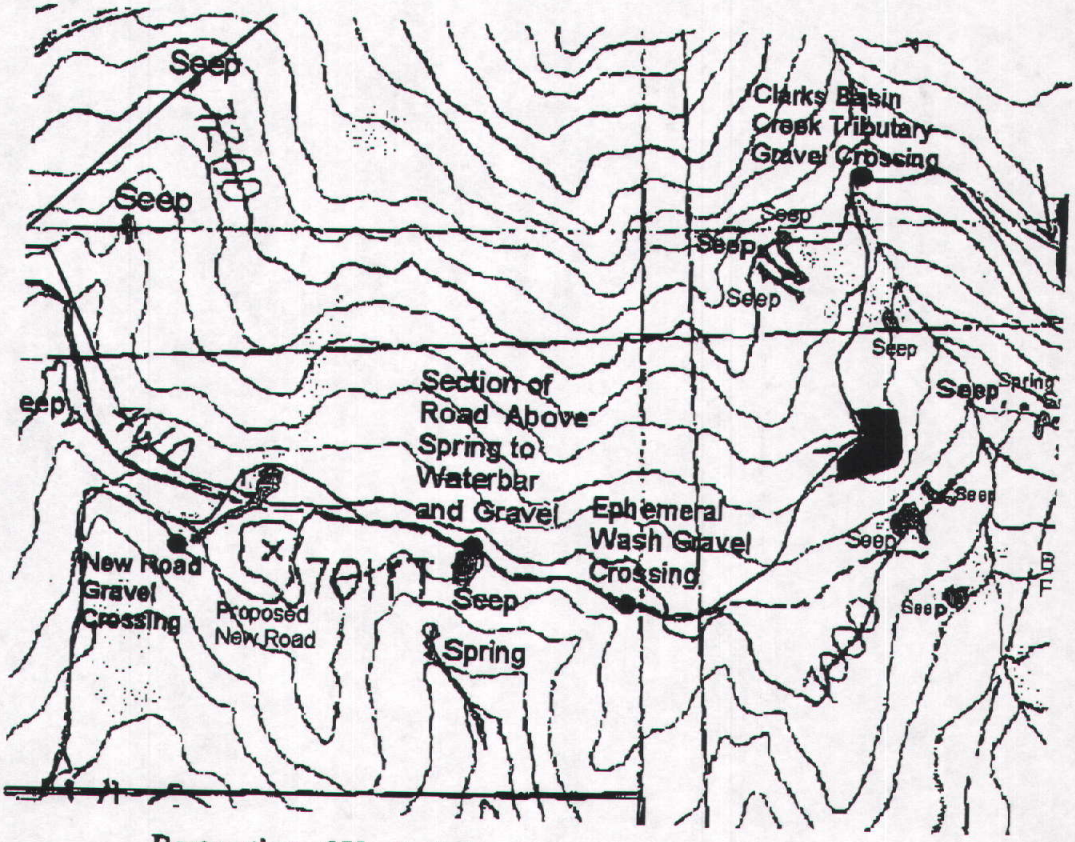

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Bond Estimate:

Direct Costs

Hazmat, Water Quality, Neutralization, and Remediation
-No bond will be required for this component – mitigation measures will be monitored

Demolition, Removal, and Disposal of Structures, Improvements, Equipment and other Debris
-No bond will be required for this component – mitigation measures will be monitored.

Monitoring and Maintenance
-No bond will be required for this component – mitigation measures will be monitored. It is assumed that the site can be visually inspected while on route to other projects on the forest.

Recontouring:

-Sunshine East-recontour waste piles back into pit
1) Waste Rock 50' pit wall x 400' pit floor x 300' width x ½ = 3,000,000 bcf
3,000,000 bcf x 1.2 swell = 3,600,000 lcf/27ft3 = 1300000 lcy
1,300,000 x .1 (waste factor estimated from Bown data) = 13,000 lcy waste
D7 dozer production with average dozing distance 200 feet = 400 cy/hr
Job Efficiency = .83
Loose Material Factor = 1.2
Grade 10% Uphill = .8
400 cy/hr x .83 x 1.2 x .8 = 319 cy/hr
13,000lcy/319cy/hr = 41 hrs
41 hrs. x [$99.28/hr (R4 Est. Guide D7) + $38.40 (R4 Operator)] = $5644
2) Topsoil 3.14 acres x .5' depth = 2500 cubic yards
2500 cubic yards/319cy/hr = 8 hours
8 hours x 137.74 = $1100

-Vertical Cloud-recontour waste piles back into pit
1)Waste Rock 40' pit wall x 280' pit floor x 160'width x ½ = 896,000 bcf

896,000 bcf x 1.2 swell = 1,075,200 lcf/27ft3 = 39822 lcy
39,822lcy x .25 (est. waste factor) = 9955lcy
D7 dozer production with average dozing distance 140' = 500 cy/hr
500 cy/hr x .83 x 1.2 x .8 = 398 cy/hr
9955lcy/398cy/hr = 25 hrs
25 hrs. x [99.28 (R4 Est. Gd. D7) + 38.40 (R4 Operator)] = $3442

2) Topsoil 1.4 acres x .5' depth = 1129 cubic yards
1129 cubic yards/398cy/hr = 2.8 hrs
2.8 hrs x 137.74 = $385

-New Access Road

1) Road 8700 linear feet x 16' average width x 3' average cut x ½ = 208800 bcf
208,800 bcf x 1.2 swell = 250,560 lcf/27ft3 = 9280 lcy
318 Excavator 1.57 yd3 bucket
20 second average cycle time
1.57 yd3 x 3 cycles/min x 60 min = 282 cy/hr
282 cy/hr x .83 (efficiency) x 1.0 (loose material) = 234 cy/hr
9280 lcy/234cy/hr = 39.6 hours
39.6 hrs x [99.28 (R4 Est. Gd.) + 38.63 (R4 Est. Gd.)] = $5461

Mob/Demob:

- Mob/Demob/Unload 6 hours from Burley x $82.20/hr included in existing bond for Dove Creek Quarry

Revegetation and Erosion Control:

- Sunshine East 3.14 acres + Vertical Cloud 1.4 acres + [Access Road 8700 linear feet x 16' road surface] = 7.7 acres
- estimated reseed time 0.5 acres per hour (experience) x 7.7 acres = 15.4 hours
- Laborer Travel 4 hour roundtrip travel from Burley included existing bond
- 15.4 hours x $26.01/hour (R4 2002 Cost Estimating Guide) = $400
  Seed $100.00 (Estimate)/acre x 7.7 acres = $770

Direct Cost Total ***$17202***

Indirect Costs

Inspection/Closure:

- Included Existing Dove Creek Bond

Contracting:

-Included in existing bond

Contractor's Cost
-Performance bonding, insurance, profit, taxes, overhead, and risk @13% of direct costs minus monitoring and maintenance = $2236

Engineering and Redesign:
-This plan and bond calculation serves as the engineer's estimate and scope of work to be supplied to the contracting office, so no additional engineering and redesign costs are expected.

Mobilization
-Mobilization was included in the cost components described above

Contingency
-No contingency is expected since the site has been inspected by the minerals administrator, the bond and plan is updated and the probability and risk are low for water degradation, slope stability failures, unforeseen site conditions, etc.

Inflation
-No inflation was added since the bond amount is revised periodically by Utah Division of Oil Gas and Mining.

Total Indirect Costs	***$2236***
Grand Total	**$19438**

Bond Update Criteria – The bond amount may be periodically reviewed and adjusted to compensate for completed reclamation work, changes in equipment rental rates, wage rate scales, increased scope of operations, etc. The bond will be reviewed on at least an annual basis and will be adjusted if the amount of disturbance (including addition of equipment, improvements, and materials) increases or decreases.

Bond Release Criteria –

- Partial Release – Upon completion of the project, portions of the bond can be released when: 1) equipment, improvements, and supplies have been removed from the mine site, 2) earthwork (recontouring, reshaping, ripping, etc.) has been completed and the areas are stabilized and reseeded. The amount of bond covering these activities can be released and only the portion covering the revegetation will be held.
- Long Term (Interim) Shutdown – The operator will notify the District Ranger and long term (interim) shutdown reclamation measures will be agreed upon. The total bond will be held until reclamation is complete.
- Minimum Acceptable Revegetation – Revegetation of the disturbed areas will be considered adequate when a minimum of 70 percent ground cover has been maintained for 2 consecutive years over 90 percent of the area reclaimed. Ground cover will be comparable to an adjacent reference area.

- Final Bond Release – Total release of the bond can only be approved when all surface structures, equipment, and supplies have been removed; all disturbed areas have been recontoured, reshaped, and adequate drainage has been completed; and revegetation has been completed to the Forest Standard

References

- 2002 Cost Estimating Guide for Road Construction (USFS-R4)
- Caterpillar Performance Handbook Ed. 31

Plan preparer: Steven J Koch Date: 27Feb06

Operator: William L Bo[illegible] Date: 27 MAR '06

Approving Officer: Scott [illegible] Date: 4/3/06